

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7032

Petitions of Vermont Electric Power Company, Inc. ("VELCO"), Green Mountain Power Corporation ("GMP"), and the Town of Stowe Electric Department ("Stowe") and for a certificate of public good, pursuant to 30 V.S.A. Section 248, authorizing VELCO to upgrade a substation in Moretown, Vermont; construct .3 miles of side by side single pole tap; construct a switching station in Duxbury, Vermont; construct 9.4 miles of 115 kV transmission line; upgrade an existing GMP 34.5 kV subtransmission line; construct a substation in Stowe, Vermont; and for Stowe to construct 1.05 miles of 34.5 kV subtransmission line in Stowe, Vermont.

VERMONT AGENCY OF NATURAL RESOURCES' PREFILED REBUTTAL
TESTIMONY OF DIANA L. FREDERICK

Q1. Please state your name, business address and occupation.

A1. Diana L. Frederick, Vermont Department of Forests, Parks & Recreation, 5 Perry St., Suite 20, Barre, VT 05641-4265. I am the District State Lands Stewardship Forester.

Q2. Did you submit prefiled direct testimony in this proceeding?

A2. Yes. My education and employment experience and current job responsibilities are summarized on page 1 of my direct testimony and in Exhibit ANR-DF-1.

Q3. What is the purpose of your rebuttal testimony in this proceeding?

1 **A3.** The purpose of my rebuttal testimony is to provide comment on the direct
2 testimony of the Department of Public Service witness David Raphael and the
3 direct testimony of the Gregg Hill Residents' witnesses William D. Orr and
4 Frederick D. Abraham.

5

6 **Q4.** **Have you reviewed the direct testimony of David Raphael?**

7 **A4.** Yes.

8

9 **Q5.** **Do you agree with Mr. Raphael's assessment of visual impacts of the**
10 **proposed VELCO transmission on the state owned lands in the Mount**
11 **Mansfield State Forest, the Waterbury Reservoir and the associated**
12 **recreational facilities?**

13 **A5.** Yes.

14

15 **Q6.** **Have you reviewed the direct testimony of William D. Orr and the reroute**
16 **proposed by the Gregg Hill Residents?**

17 **A6.** Yes. Although a specific line for the reroute was not identified, I was able to
18 address impacts to state lands from the general proposal. Additional analysis may
19 be required if an actual route is specifically identified.

20

21 **Q7.** **Are there any state policies that guide the evaluation of proposed uses of**
22 **state lands?**

1 **A7.** Yes. The Agency of Natural Resources Policy: Uses of State Lands addresses the
2 philosophy of uses of state land and provides general criteria for uses of state
3 lands and states that some uses may be inappropriate and therefore not permitted.
4 The policy states that "...uses may be denied, or permitted only under stringent
5 conditions to insure that (1) natural resources and associated values are not
6 destroyed or degraded, (2) they are in keeping with existing public uses and
7 original intent of the acquisition, (3) they are not solely for private gain (that is,
8 the public must benefit from the uses, as well), and (4) individuals participating in
9 group events/activities for which a fee is charged are protected from any liability
10 actions related to the events/activities." See Exhibit ANR Rebuttal SB-1. This
11 policy was developed to avoid setting a precedent where state land would become
12 the repository for all uses not desired on private land.

13

14 **Q8.** **Would the Gregg Hill Residents' proposed reroute be an acceptable use**
15 **under the Agency of Natural Resources Policy: Uses of State Lands?**

16 **A8.** No. As discussed in more detail below, the proposed reroute benefits only a few
17 adjacent landowners and results in degradation of natural resources, is not
18 consistent with existing public uses or the original intent of acquisition, and is
19 primarily for private gain with no public benefit.

20

21 **Q9.** **Could you please describe the existing condition of the portion of the state**
22 **forest that would be impacted by construction of this reroute?**

1 **A9.** This existing portion of state land consists of a small stand of dense hemlock and
2 a larger stand of mixed pioneer species of trees, namely red maple, white birch
3 and aspen, along with some cherry, sugar maple and white pine. The understory
4 contains hemlock and spruce seedlings and saplings. There are wildlife signs
5 within this area.

6

7 **Q10. Do you agree with Mr. Orr's assessment of the impacts of the Gregg Hill**
8 **Residents' proposed reroute of the VELCO transmission line?**

9 **A10.** No. Mr. Orr's testimony attempts to present an argument that the proposed
10 reroute would benefit the state of Vermont, but he only focuses on visual impacts
11 from the Orr, Bankson and Abraham residences and a section of the Gregg Hill
12 Road and a discussion of potential loss of property values (see page 1, line 29,
13 page 2, lines 1-2; page 3, lines 9-10, 18-21). Mr. Orr's testimony does not
14 address visual impacts from any other vantage point on the state forest, Waterbury
15 Reservoir or any of the associated recreational facilities that would result from
16 construction of the proposed reroute. He also does not consider any other types of
17 impacts to the state forest.

18

19 **Q11. Please describe the impacts to state owned lands that would result from**
20 **construction of the proposed reroute?**

21 **A11.** The new reroute would have direct impact on the existing ecology of this portion
22 of the state forest.

23

1 The actual footprint of disturbed land will be greater with the proposed reroute
2 than with the existing route, as discussed below. The reroute will require the clear
3 cutting of a new 100 foot corridor which will destroy forest resources in that
4 corridor. Also, not only will the forest be fragmented by the Gregg Hill Road it
5 would be additionally fragmented by this new proposed power line corridor only
6 500 feet away. As discussed below, the proposed reroute will interfere with a
7 scheduled timber harvest for this area which is planned to selectively harvest trees
8 that will promote the production of existing timber resources and improve the
9 health and quality of the stand and result in a more productive and healthy forest
10 resource. Finally, it will most likely result in an increased negative visual impact
11 on the Waterbury Reservoir and all associated recreational facilities and the
12 immediate area of the forest, specifically the Blush Hill boat access, the
13 Waterbury Day Use Area, the Peninsula Nature Trail, and remote campsites on
14 the south shore of the reservoir. This will affect the users of these areas (see
15 rebuttal testimony of Susan Bulmer).

16
17 **Q12. Do you agree with Mr. Orr's statement on page 2, lines 3-4 and 9-11 that the**
18 **proposed reroute would result in the Gregg Hill Neighborhood retaining and**
19 **even enhancing its rural character?**

20 **A12.** No. A portion of the Mount Mansfield State Forest is part of the Gregg Hill
21 neighborhood Mr. Orr refers to and in fact the undeveloped forest largely
22 contributes to the "rural character" of this neighborhood. On a site visit
23 conducted on May 10, 2005, I made measurements of the existing corridor and

1 the distance required to traverse state land for the proposed reroute. The existing
2 GMP power line corridor north of Waterbury Reservoir runs through about 1,060
3 feet of forest land until it meets Gregg Hill Road. The existing line then parallels
4 Gregg Hill Road on the west side for about 460 feet, in the next 380 feet the
5 power line runs over the road and crosses to the east side before crossing the state
6 boundary line. As a result of the reroute, about 430 feet of the existing line could
7 revert back to undeveloped forest, the remaining 840 feet of the line is adjacent to
8 the Gregg Hill Road and within the road right-of-way, this area may or may not
9 become re-vegetated based on the Town of Waterbury's desire to maintain a
10 cleared right-of-way. The proposed reroute would result in the new clearing of a
11 100 foot right-of-way for 1,400 feet through undeveloped forest land.

12
13 The proposed reroute would most likely start at Pole 57, which is where the
14 existing line crests the hill and heads down to the Reservoir. This would result in
15 removing 4 transmission poles from the existing GMP right-of-way, however the
16 new reroute will likely require more poles since it will travel at least 200 feet
17 further and make a turn about half way instead of going straight like the existing
18 GMP line. After the line crosses Gregg Hill Road it would then go up to the
19 height of land and will probably be more visible from other locations especially
20 the recreational facilities on the Reservoir. It also may not be just the clearing
21 that is visible, but the poles themselves since they will be 30-40 feet higher than
22 the existing poles.

1 Creating a new 100 foot clearing through a portion of the undeveloped state forest
2 would be a detriment to Vermont's rural character – again, it is this forest area
3 that largely contributes to the “rural” character of Gregg Hill Road. It is my
4 observation that this portion of the Gregg Hill Road is littered with power lines,
5 not only the GMP transmission line, but with a conglomerate of distribution lines
6 and smaller transmission lines. From the Gregg Hill Road it is often difficult to
7 determine which line is GMP's. The GMP line is often hidden from view of the
8 road while all these other lines remain.

9

10 **Q13. Do you agree with Mr. Orr's statement that the proposed reroute will “yield**
11 **a greater public good than the existing installation?”**

12 **A13. No. For all the reasons discussed above and the fact that a portion of the reroute**
13 **may actually be more visible from the Gregg Hill Road and the recreational**
14 **resources associated with the Waterbury Reservoir since the reroute will be**
15 **moved to the height of land in the area and thus will be at a higher elevation than**
16 **the existing line. The resulting increased impacts to the 60,000 plus recreational**
17 **users of this state land does not result in a greater public good. Also, as discussed**
18 **above, the reroute is contrary to the Agency land use policy.**

19

20

21 **Q14. On page 8, lines 8-16 Mr. Orr states that the VELCO proposal “would**
22 **have an undue adverse effect on the aesthetics of that section of the forest.**
23 **Any electric power line, including the existing one, does not harmonize with**

1 **the character of any forest....The Gregg Hill Residents’ proposal will yield**
2 **an aesthetic improvement over the present installation by eliminating 800**
3 **feet of existing 34.5 kV line that now runs along Gregg Hill Road through the**
4 **State Forest.” Do you agree with these statements?**

5 **A14.** I agree that electric power lines do not harmonize with forest land. However, I do
6 not agree that the Gregg Hill Residents’ proposal will yield an aesthetic
7 improvement over the existing VELCO proposal. As discussed above, Mr. Orr’s
8 statements ignore the adverse impacts upon the state forest and the Waterbury
9 Reservoir as a whole and ignore the fact that the existing line largely runs along
10 Gregg Hill Road in the existing right-of-way which could remain in its current
11 state regardless of whether the line is relocated or not. Therefore, the proposed
12 reroute actually has an increased impact upon the state forest lands.

13

14 **Q15. Do you have any comments on Mr. Orr’s discussion on page 5, line 13**
15 **through page 6 line 24 as related to state owned lands?**

16 **A15.** Yes. I interpret Mr. Orr’s discussion on pages 5 and 6 and all the arguments
17 supporting the proposed reroute as essentially stating that it is in the public
18 interest to convert undeveloped state forest lands into a new electric transmission
19 line corridor which will have increased adverse impacts on one of the most
20 heavily used recreational areas in the central part of the state if impacts to a few
21 private landowners will be reduced. While there are annually up to 60,000 visitors
22 to the Waterbury Reservoir area of Mt. Mansfield State Forest, the state forest is
23 managed for the approximately 600,000 residents of the State of Vermont. When

1 decisions on management of state-owned lands are made, they are based on
2 what's best for the resources owned by all the residents of the State and not just
3 the adjacent landowners to that state land. The Department is charged with
4 managing state lands in a manner that is in the best interest of the public and is
5 consistent with the purposes for which that land was acquired. The Department
6 has a longstanding policy against uses of state lands that would only benefit a few
7 private individuals and not benefit the public. The proposed reroute would not
8 benefit the public and would not be in the public interest because it would result
9 in increased negative impacts on the state forest and Waterbury Reservoir and all
10 associated recreational facilities, especially where there is an existing corridor that
11 runs along an already disturbed part of the state forest, namely Gregg Hill Road.

12
13 **Q16. Do you have any concerns with the map of the proposed Gregg Hill reroute**
14 **labeled Figure 1 Map of alternate route proposed by Gregg Hill Residents**
15 **which is attached to Mr. Orr's testimony?**

16 **A16.** Yes. The figure incorrectly portrays the location of the existing GMP line on
17 state lands. The power line clearing is clearly visible in the photo, however, the
18 existing line is mapped and highlighted outside this clearing. The map portrays
19 the existing line corridor to be a much larger area than it actually is. It also
20 portrays the line to be on the east side of the Gregg Hill Road where it parallels
21 the road instead of on the west side. These incorrect portrayals could be very
22 misleading when discussing impacts from VELCO's proposal using the existing
23 corridor versus the Gregg Hill reroute proposal.

1 **Q17. Do you have any comments on Figure 2. Existing line through a portion of**
2 **the State Forest which is attached to Mr. Orr's direct testimony?**

3 **A17.** Yes. As the text below the photograph states, this view is taken from Gregg Hill
4 Road looking south at the approximate boundary line of the state forest. Thus this
5 view is not important to users of the state forest. The greatest impact from the
6 proposed reroute will be to the viewshed from the Waterbury Reservoir area.
7 From the Blush Hill boat ramp the existing GMP line is visible for a short
8 distance as it rises up towards Gregg Hill Road and then it disappears from view.
9 The proposed reroute would start at the point where the existing line disappears
10 from view creating a larger opening at this point. The proposed reroute would also
11 be visible after it crosses the Gregg Hill Road and rises up the slope on state land
12 creating an increased visual impact when compared to the existing location (see
13 Susan Bulmer's rebuttal testimony). As the photo in Figure 2 shows, the forest is
14 already fragmented at this point, the least impact will be to keep any new
15 construction within the existing GMP right-of-way along the Gregg Hill Road
16 right-of-way instead of maintaining this right-of-way and creating a new one and
17 further fragmenting the state forest. These impacts were not considered by Mr.
18 Orr and Mr. Abraham. Their testimony focused on visual impacts to Gregg Hill
19 Road and their personal residences.

20 **Q18. Have you reviewed the direct testimony of Frederick D. Abraham?**

21 **A18.** Yes.
22

23 **Q19. Do you have any comments on Mr. Abraham's testimony?**

1 **A19.** Yes. Mr. Abraham's testimony supplements Mr. Orr's testimony, thus the
2 discussion of Mr. Orr's testimony above is also applicable to Mr. Abraham's
3 testimony. Additionally, Mr. Abraham states that he has an "interest in the beauty
4 and quiet enjoyment of the ...Mount Mansfield State Forest" but urges the Public
5 Service Board to authorize a new route through undeveloped state forest land that
6 would require clearing a new 100 foot right-of-way for approximately 1,400 feet
7 through a vegetated hill that includes some valuable cherry, among other
8 timberand habitat for wildlife. This clearing would result in significant adverse
9 impacts to the viewshed of the Waterbury Reservoir which would impact up to
10 60,000 recreational users of the associated recreational access areas and the
11 Reservoir. This reroute is not consistent with the Agency Uses of State Lands
12 policy and I do not believe this reroute would be in the public good.

13
14 **Q20. On pages 3-4, Mr. Abraham states that the approximately 900 foot portion of**
15 **state forest land that would need to be cleared for the reroute can be seen**
16 **from Route 100 and presents an analysis of tree height in this area. Do you**
17 **agree with Mr. Abraham's discussion of tree height and visibility on the state**
18 **owned land?**

19 **A20.** No. I have visited this site and conducted measurements of trees on this piece of
20 state land that are not consistent with Mr. Abraham's testimony. First, the method
21 Mr. Abraham used is subject to human error and is not the acceptable method of
22 measuring tree heights in the field of forestry. I used a clinometer to measure the
23 heights of the trees at the height of land and found they average only 70 to 80 feet.

1 After looking at topographic maps of this area it is not clear to me that the reroute
2 will be hidden from view of Route 100 while it is on state land due to topography
3 and actual measured height of trees.
4

5 **Q21. Do you agree with Mr. Abraham's comments on page 5, lines 10-15 that**
6 **potential clear cutting of the existing right-of-way would increase the**
7 **negative aesthetic impact on the Mount Mansfield State Forest as compared**
8 **to the reroute proposed by the Gregg Hill Residents?A21. No. As stated**
9 before when discussing Mr. Orr's testimony, the existing right-of-way and Gregg
10 Hill Road already create a fragmenting feature within the state forest. Even if the
11 existing right-of-way were slightly widened it would not have the same negative
12 impact of the addition of a new 100 foot cleared corridor through the state forest.
13 To limit the effects of fragmentation on the forest and for all the other reasons
14 previously stated, it is better to leave the right-of-way where it currently is.
15

16 **Q22. Would the Gregg Hill Residents' proposed reroute have any other impacts to**
17 **the state forest land?**

18 **A22.** Yes. As I discussed in my direct testimony, the Department has a scheduled
19 timber sale that is scheduled to be marked and sold this summer (2005). The
20 contractor would have until June 30, 2007 to complete operations. The
21 Department regularly conducts selective timber harvests on state lands to achieve
22 the goal of sustainable forest management, to promote production of timber
23 resources, to promote regeneration of a future stand, to remove at risk and

1 diseased trees to improve the overall health of the stand and to remove pioneer
2 species which can overtake more valuable, longer lived species. Additionally, the
3 proceeds from timber sales such as this one are deposited into the state of
4 Vermont's Lands and Facilities Trust Fund and are dedicated to the stewardship
5 of state lands and facilities. The proposed reroute, if approved, would at a
6 minimum drastically change the prescription for this area and result in the larger
7 loss of sustainable resource base permanently removing this land from timber
8 production and its potential to produce valuable high quality timber.

9

10 **Q23. Does this conclude your testimony?**

11 **A23.** Yes.

12

13